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a biological material,
wherein said sol solution is compatible with said biological material.

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cont
15. (Amended) A sol, comprising:

P moles of a hydroxy metallate;

W moles of water;

a sufficient amount of a dispersant to cause macropores in a gel formed by said sol; and
a biological material.

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17. (Amended) The sol according to claim 15, wherein:
said hydroxy metallate is formed by hydrolysis of a sol-gel precursor; and
a ratio of W:P is greater than 25:1.

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18. (Amended) The sol according to claim 17, wherein said sol-gel precursor comprises
an alkoxy metallate.

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22. (Amended) The sol according to claim 21, further comprising nutrients configured
to support said biological cell.

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24. (Amended) The sol according to claim 17, further comprising an organic solvent
comprising an organic by-product arising from the hydrolysis of said sol-gel precursor.

25. (Amended) The sol according to claim 15, wherein a ratio of W:P is greater than
100:1.

Please add new claims 26-36 as follows.

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--26. (New) A method, comprising:

mixing a biological material into a sol;

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mixing a sufficient amount of a dispersant into said sol to cause macropores in a gel formed by said sol; and
gelling said sol to form said gel.

27. (New) A sol capable of forming a gel, comprising nutrients configured to support a cell.

b

28. (New) A gel, comprising:
a solid network formed by the condensation of hydroxy metallates from a sol solution;
and
a cell added to the sol solution and thereby immobilized within said solid network,
wherein said sol solution is compatible with said cell.

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29. (New) A gel, comprising:
a solid network formed by the condensation of hydroxy metallates from a sol solution,
the solid network defining macropores; and
a biological material added to the sol solution and thereby immobilized within said solid network.

30. (New) The gel of claim 29, wherein said biological material comprises a cell.

b

31. (New) The gel of claim 30, wherein said macropores are abundant enough and dimensioned to transmit less than about 35% of a 700 nm wavelength light beam over a pathlength of about 0.9 cm when said macropores are filled with air.

b

32. (New) The gel of claim 31, wherein said macropores are abundant enough and dimensioned to transmit less than about 30% of said light beam.

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33. (New) The gel of claim 32, wherein said macropores are abundant enough and dimensioned to transmit less than about 18% of said light beam.

34. (New) The gel of claim 33, wherein said macropores are abundant enough and dimensioned to transmit less than about 9% of said light beam.

*A 6
cont*

35. (New) The gel of claim 34, wherein said macropores are abundant enough and dimensioned to be opaque to said light beam.

36. (New) The gel of claim 30, wherein said cell is entrapped within said solid network.--